Academy
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Primitives

Primitive $\longleftrightarrow$ Dérivée

$$F \longleftrightarrow f \longleftrightarrow f' \longleftrightarrow f''$$

$$c^{te}\,x \longleftrightarrow c^{te}$$

$$3x \longleftrightarrow 3$$

$$-\sqrt{2}\,x \longleftrightarrow -\sqrt{2}$$

$$\frac{x^{n+1}}{n+1} \longleftrightarrow x^n$$

$$\frac{x^2}{2} \longleftrightarrow x$$

$$\frac{x^4}{4} \longleftrightarrow x^3$$

$$-\frac{1}{(n-1)x^{n-1}} \longleftrightarrow \frac{1}{x^n} \qquad n \in \mathbb{N}^* \setminus \{1\}$$

$$-\frac{1}{2x^2} \longleftrightarrow \frac{1}{x^3}$$

$$-\frac{1}{6x^6} \longleftrightarrow \frac{1}{x^7}$$

$$\frac{2}{3}x\sqrt{x} \longleftrightarrow \sqrt{x}$$

$$2\sqrt{x} \longleftrightarrow \frac{1}{\sqrt{x}}$$

$$\frac{2}{3}u\sqrt{u} \longleftrightarrow u'\sqrt{u}$$

$$\frac{2}{3}(x^2+1)\sqrt{x^2+1} \longleftrightarrow 2x\sqrt{x^2+1} \qquad (u = x^2+1,\ u' = 2x)$$

$$2\sqrt{u} \longleftrightarrow \frac{u'}{\sqrt{u}}$$

$$2\sqrt{x^2+1} \longleftrightarrow \frac{2x}{\sqrt{x^2+1}} \qquad (u = x^2+1,\ u' = 2x)$$

$$\frac{u^{n+1}}{n+1} \longleftrightarrow u'u^n$$

$$\frac{(x^2+1)^8}{8} \longleftrightarrow 2x(x^2+1)^7 \qquad (u' = 2x,\ u = x^2+1)$$

$$-\frac{1}{(n-1)u^{n-1}} \longleftrightarrow \frac{u'}{u^n}$$

$$-\frac{1}{6(x^2+1)^6} \longleftrightarrow \frac{2x}{(x^2+1)^7} \qquad (u = x^2+1,\ u' = 2x)$$

$$u \circ v(x) \longleftrightarrow v' \times u'(v(x))$$

$$\sin(\ln x) \longleftrightarrow \frac{1}{x}\cos(\ln x) \qquad (u = \sin,\ v = \ln x,\ v' = \frac{1}{x},\ u' = \cos)$$